NUS National University of Singapore | Department of Biological Sciences, Faculty of Science

SEMINAR

Monday 9 Oct 2017 | 11am | DBS Conference Room 1

Hosted by A/P Henry Mok

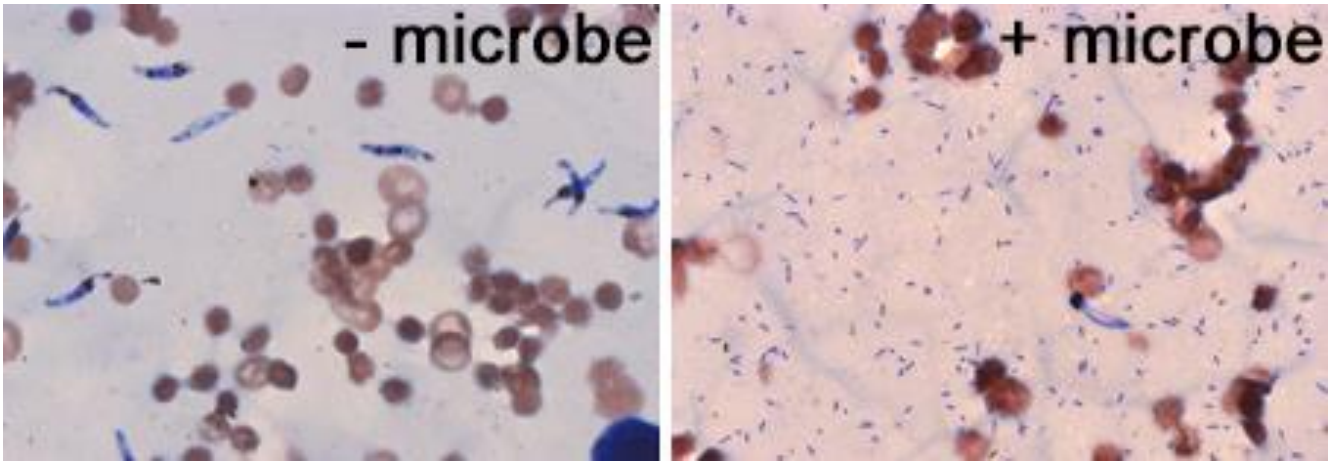
Novel microbe-based control strategies for mosquito-borne disease transmission



By **George Dimopoulos**

Professor, Department of Molecular Microbiology and Immunology, Malaria Research Institute, Johns Hopkins University, USA

Mosquitoes interact with a variety of microbes, and have a diverse intestinal microbiota, which plays essential roles in a variety of the insect's physiological functions. These microbes can also influence vector competence for human pathogens in multiple ways, including immune system activation or suppression, direct inhibition of the pathogen, and mosquito killing. Exploration of microbe-based anti-pathogen and entomopathogenic activities can provide essential knowledge for the development of novel disease-control approaches based on blocking pathogen infection in the mosquito and in the vertebrate host, and/or shortening the mosquito's life span. We will discuss and provide mechanistic insights on the negative and positive effects of natural environmental microbes on mosquito vector competence.



Artwork by Ann Nee, DBS, NUS